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(54) Methods of applying heat and oxidation resistant coating materials

(57) Methods of coating heat and oxidation resistant coating materials which, by being coated and sintered onto the surface of an object to be treated, such as a metal, a firebrick, etc., improves the resistance to heat, oxidation, wear, etc. of incinerators, boilers, heat exchangers, internal combustion engines, heat insulations for braking devices etc. which uses the abovementioned object treated.

By blending high melting point materials, such as zirconium dioxide, aluminum oxide, magnesium oxide, etc. with auxiliaries which serve a catalytic role, the high melting point materials and the surface of the object to be treated are caused to melt at temperatures no higher than the melting point of the object and a ceramic compound is formed on the surface of the object. Furthermore, by blending auxiliaries which provide the effects of making the coating material accommodate for the thermal expansion of the object and of restricting thermal oxidation, the coalescence with the object and the oxidation resistance of the object are increased. An aqueous solution of potassium silicate of a specific concentration is mixed with powder materials to put the ingredients of the coating material in a solution form.

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EUROPEAN SEARCH REPORT

Application Number
EP 95 11 2412

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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 24 March 1997	Examiner Rosenberger, J
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application f : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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